

AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions of claims in the application:

LISTING OF CLAIMS:

1-29. (CANCEL)

30. (ORIGINAL) A magnetic head, comprising:
an etch stop layer;
a transfer layer positioned above the etch stop layer with a trench formed therein;
a pole tip layer situated in the trench to define a pole tip structure flanked at least in part by the transfer layer;
wherein at least one of an upper surface and a lower surface of at least one of the etch stop layer and the transfer layer remains in co-planar relationship with at least one of an upper surface and a lower surface of the pole tip structure.
31. (ORIGINAL) A magnetic head, comprising:
an etch stop layer; and
a pole situated on top of the etch stop layer;
wherein at least one of an upper surface and a lower surface of the etch stop layer remains in co-planar relationship with at least one of an upper surface and a lower surface of the pole.
32. (ORIGINAL) A disk drive system, comprising:
a magnetic recording disk;
a magnetic head including:
an etch stop layer, and

a pole situated on top of the etch stop layer,
wherein at least one of an upper surface and a lower surface of the etch stop layer remains in co-planar relationship with at least one of an upper surface and a lower surface of the pole;
an actuator for moving the magnetic head across the magnetic recording disk so the magnetic head may access different regions of the magnetic recording disk; and
a controller electrically coupled to the magnetic head.

33. (ORIGINAL) A disk drive system, comprising:

a magnetic recording disk;

a magnetic head including:

an etch stop layer,

a transfer layer positioned above the etch stop layer with a trench formed therein, and

a pole tip layer situated in the trench to define a pole tip structure flanked at least in part by the transfer layer,

wherein at least one of an upper surface and a lower surface of at least one of the etch stop layer and the transfer layer remains in co-planar relationship with at least one of an upper surface and a lower surface of the pole tip structure;

an actuator for moving the magnetic head across the magnetic recording disk so the magnetic head may access different regions of the magnetic recording disk; and
a controller electrically coupled to the magnetic head.

34. (NEW) The process as recited in claim 31, wherein the etch stop layer includes a non-magnetic material.

35. (NEW) The process as recited in claim 31, wherein the etch stop layer includes an insulator.

- 36. (NEW) The process as recited in claim 31, wherein the etch stop layer is deposited utilizing a sputtering operation.
- 37. (NEW) The process as recited in claim 31, wherein a planarization operation is performed on the etch stop layer.
- 38. (NEW) The process as recited in claim 31, further comprising a transfer layer positioned above the etch stop layer with a trench formed therein, wherein the transfer layer includes a material capable of being ion-etched.
- 39. (NEW) The process as recited in claim 31, further comprising a transfer layer positioned above the etch stop layer with a trench formed therein, wherein an adhesion layer is deposited above the transfer layer.
- 40. (NEW) The process as recited in claim 39, wherein the adhesion layer includes a material selected from the group consisting of Si, Ta, Cr, and Ti.
- 41. (NEW) The process as recited in claim 39, wherein a planarization stop layer is deposited above the adhesion layer.
- 42. (NEW) The process as recited in claim 41, wherein the planarization stop layer includes a material selected from the group consisting of C, SiN_x, Ta, and Ti.
- 43. (NEW) The process as recited in claim 41, wherein a planarization operation is performed on the pole tip layer.
- 44. (NEW) The process as recited in claim 41, wherein a transfer layer is deposited above the planarization stop layer.

45. (NEW) The process as recited in claim 30, wherein the pole tip layer includes a ferromagnetic material.
46. (NEW) The process as recited in claim 30, wherein the pole tip layer includes a material selected from the group consisting of NiFe and CoFe.
47. (NEW) The process as recited in claim 30, wherein the pole tip layer is deposited utilizing ion beam deposition.
48. (NEW) The process as recited in claim 30, wherein the pole tip layer is deposited utilizing sputtering.
49. (NEW) The process as recited in claim 30, wherein the pole tip layer is deposited utilizing electroplating.
50. (NEW) The process as recited in claim 30, wherein an adhesion layer is deposited above the pole tip layer.
51. (NEW) The process as recited in claim 50, wherein the adhesion layer includes a material selected from the group consisting of Si, Ta, Cr, and Ti.
52. (NEW) The process as recited in claim 50, wherein a planarization stop layer is deposited above the adhesion layer.
53. (NEW) The process as recited in claim 52, wherein the planarization stop layer includes a material selected from the group consisting of C, SiN_x, Ta, and Ti.
54. (NEW) The process as recited in claim 52, wherein a capping layer is deposited above the planarization stop layer.

- 55. (NEW) The process as recited in claim 54, wherein a planarization operation is performed on the capping layer.
- 56. (NEW) The process as recited in claim 55, wherein the capping layer remains over the pole tip structure after the planarization operation.
- 57. (NEW) The process as recited in claim 56, wherein a reactive ion etching operation is performed to remove the planarization stop layer surrounding the pole tip structure.
- 58. (NEW) The process as recited in claim 57, wherein another planarization operation is performed on a remaining portion of the pole tip layer surrounding the pole tip structure.
- 59. (NEW) The process as recited in claim 58, wherein another reactive ion etching operation is performed on a remaining portion of the planarization stop layer situated above the pole tip structure.
- 60. (NEW) The process as recited in claim 59, wherein a planarization operation is performed on a remaining portion of the pole tip layer situated above the transfer layer.